E285 > A,

Y231 > X, and/or

A305 > E,

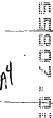
or an allelic variant of said mutant aspartoacylase.

24. (Amended) A mutant aspartoacylase of claim [23] 22, wherein the glutamic acid at amino acid position 285 is substituted by alanine.

Please add the following new claims:

- 66. (New) A fragment of a mutant human aspartoacylase of claim 22, comprising an aspartoacylase epitope.
- 67. (New) A recombinant normal human aspartoacylase capable of hydrolyzing Nacetyl aspartic acid to aspartate and acetate, having an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2.
- 68. (New) A fragment of a recombinant normal human aspartoacylase of claim 20, comprising an aspartoacylase epitope.







ľŲ

- 69. (New) A pharmaceutical composition, comprising an isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, and a pharmaceutically acceptable carrier.
- 70. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, which is free of other cellular components.
- 71. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, which is free of other human proteins.
- 72. (New) A preparation which consists essentially of a normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof.
- 73. (New) An isolated normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, in a concentration which can be administered to a patient at a dosage of 0.1 to 100 U/kg.
- 74. (New) A normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, produced by
- (a) culturing a host cell transformed with a vector comprising a DNA which encodes for a normal human aspartoacylase of claim 20 in a cell culture medium under conditions whereby the aspartoacylase is expressed, and
 - (b) isolating the thus-produced normal aspartoacylase.

- 75. (New) A normal human aspartoacylase having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof, produced in a bacterium, a fungus, or a non-human mammalian cell.
- 76. (New) An immunologically active anti-aspartoacylase polycolonal or monoclonal antibody specific for an aspartoacylase polypeptide of claim 20.
- 77. (New) An immunologically active anti-aspartoacylase polyclonal or monoclonal antibody specific for an aspartoacylase polypeptide of claim 22.
- 78. (New) A hybridoma producing a moloclonal antibody specific for an aspartoacylase polypeptide of claim 20.
- 79. (New) A hybridoma producing a moloclonal antibody specific for an aspartoacylase polypeptide of claim 22.
- 80. (New) A recombinant normal human aspartoacylase capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, having the amino acid sequence SEQ ID NO: 2, or a polymorphic form thereof.
- 81. (New) A normal human aspartoacylase polypeptide purified to homogeneity and capable of hydrolyzing N-acetyl-aspartic acid to aspartate and acetate.
 - 82. (New) The aspartoacylase of claim 81 having SEQ ID NO: 2.